

REMARKS

This is in full and timely response to the above-identified Office Action. The above listing of the claims supersedes any previous listing. Favorable reexamination and reconsideration are respectfully requested in view of the preceding amendments and the following remarks.

Claim Amendments/Status

Claims 1-7 and 9-21 remain pending in the application. The claims are not amended in this response. The withdrawal of the finality of previously office action is noted with appreciation.

Rejections under 35 USC § 103

- 1) Claims 1, 4-7, 10-11 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 2002/0047188) figures 3-4 in view of Martin et al. (U.S. Patent No. 2002/0047188) figures 6-7. This rejection is traversed

First, the rejection is assumed to be based on the Martin et al, in view of itself. An interesting ploy. Applicants seek the examiner's reason as to why this format has been selected and clarification as to how the hypothetical person of ordinary skill is supposed to interpret this situation. Alternatively, if the second said reference is intended to be different from the first, then a further non-final office action should be issued to remedy this error. Repeated calls to the examiner and supervisor failed to glean a response/clarification to this issue.

Claim 1 as it stands before the PTO calls for three steps:

- a) producing, in the thickness of a first silicon wafer, a porous silicon region intended to format least a part of one wall of the cavity and capable of absorbing residual gases in the cavity;
- b) joining the first silicon wafer to a second wafer, so as to produce the cavity; and
- c) annealing between 400°C and 1000°C, the microstructure obtained after step b) so as to strengthen the bond.

Martin et al. (Martin) discloses part of step a) and suggest joining two wafers albeit via adhesive in the cited embodiment shown in Fig. 4. Martin fails to disclose that

a part of one wall of the cavity is formatted and capable of absorbing residual gases in the cavity. A moisture absorption structure is briefly mentioned [0031] – but inasmuch as this is a liquid (water) the gas absorption feature is not disclosed/suggested.

However, the most debilitating shortcoming is that the third annealing step is nowhere to be found. Indeed, the entire text of Martin is devoid of the term “anneal” which would rather strongly suggest that there is no disclosure of this process at all in the Martin reference. Martin discloses bonding via heating – see [0008]. However, subsequent annealing following the bonding process, is not.

As the examiner will be aware, each of the steps which are claimed must be found in the cited art even for a rejection under § 103.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). M.P.E.P. § 2143.03. Accord M.P.E.P. § 706.02(j).

Since Martin in view of itself, fails to disclose this step, the rejection cannot be deemed tenable and is traversed accordingly.

- 2) Claims 2 and 9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 2002/0047188) figures 3-4 in view of Martin et al. (U.S. Patent No. 2002/0047188) figures 6-7 as applied to claims 1, 4-7, 10-11 and 19 above in view of Najafi et al. (U.S. Patent No. 6,499,354).

This rejection fails for the same reason advanced above. The disclosure Najafi et al. does nothing to alleviate the clear shortfall of Martin. Further, the basis for the position with respect to the gas absorption is misplaced. Moisture (liquid) is disclosed in Martin not a gas. Therefore, the basis of looking to Najafi et al. for disclosure relating to this feature is without merit.

- 3) Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 2002/0047188) figures 3-4 in view of Martin et al. (U.S. Patent No. 2002/0047188) figures 6- as applied to claims 1, 4-7, 10-11 and 19 above in view of Wood (U.S. Patent No. 5,861,545).

This rejection fails for the same reason advanced above. The disclosure Wood does nothing to alleviate the clear shortfall of Martin. The position that Wood would be looked to because an intermediate wafer would help join the upper wafer to the lower one, as well as defining the thickness of the cavity, is not well taken. This is a conclusatory position which is bootstrapped from a working knowledge of the claimed subject matter. Indeed, common sense would suggest that the intermediate wafer would cause the process to be rendered more complex, introduce the possibility of positioning error, the possibility that one of the interfaces may not bond completely allowing a non-hermetic situation to come about. There is nothing in Martin that would prompt the hypothetical person of ordinary skill to consider this spacer-like arrangement and therefore nothing to promote any reference to Wood.

- 4) Claims 20-21 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Martin et al. (U.S. Patent No. 2002/0047188) figures 3-4 in view of Martin et al. (U.S. Patent No. 2002/0047188) figures 6-7 as applied to claims 1, 4-7, 10-11 and 19 above in view of Benzel et al. (U.S. Patent No. 7,037,438).

This rejection fails for the same reason advanced above. The disclosure of Benzel et al. does nothing to alleviate the clear shortfall of Martin. This rejection first states that Martin discloses forming a porous silicon region and annealing of the same. The rejection then contradictorily indicates that the reference does not teach the annealing step. At the very least, the last mentioned statement renders the possibility of Martin disclosing all of the claimed steps recited in at least claim 1, moot and raises the question as to just what position the Examiner is taking with respect to the disclosure of the references which are being cited.

Clarification of this is deemed essential in the event that this response does not result in this application being passed to issue.


#### Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the application is in condition for allowance and a Notice to that effect is earnestly solicited.

The Examiner is invited to telephone the undersigned, Applicant's attorney of record, to facilitate advancement of the present application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,  
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